To an electric energy infrastructure of the future

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The "Electrical Energy Infrastructure of the Future" project was a collaboration between engineers and philosophers. The results have been published in a scientific journal.

Reference: Maarten J. Verkerk, Paulo F. Ribeiro, Andrew Basden, and Jan Hoogland, ‘An Explorative Philosophical Study of Envisaging the Electrical Energy Infrastructure of the Future’, *Philosophia Reformata* 83 (2018) 90-110.

Abstract:
The electrical energy infrastructure is one of the key life-sustaining technologies of contemporary Western society. This infrastructure is extremely complex due to its size, its multifarious technologies, and its interweaving with societal structures. Smart grids are important in future infrastructure, yet extant literature does not adequately address this complexity. This paper argues that different elements of the philosophy of Dooyeweerd offer a key to understanding this intricate complexity more fundamentally. Key concepts are the ideas of normative practices, enkapsis (intertwinement) of practices, individuality structures, and ideals and basic beliefs. By developing these ideas in the context of smart grid engineering, our research contributes to philosophy of technology, philosophy of design, and philosophy of sustainability. It offers an ontological analysis of these infrastructures, pointing a direction to the development of workable infrastructures and supporting the transition to a sustainable society.